Exhibit 15 - Comprehensive Nutrient Management Plan - Format and Content

A comprehensive nutrient management plan (CNMP) should address all land units that the animal feeding operation (AFO) owner and/or operator owns or has decision-making authority over **and** on which manure and organic by-products will be generated, handled, stored, or applied. This Exhibit describes the general contents of a CNMP and lists suggested items under each major section. The intent of this guidance is to help to maintain quality and provide appropriate documentation of a CNMP. The precise content of a CNMP will vary as it is tailored to the meet the needs of the AFO owner and/or operator.

Contents of a Comprehensive Nutrient Management Plan

1. Site information

- Names, phone numbers, and addresses of the AFO owner(s) and operator(s).
- Location of production site: legal description, driving instructions from nearest post office, and the emergency 911 coordinates.
- Farmstead sketch.
- Plat map or local proximity map (Optional).
- Emergency action plan covering: fire, personal injury, manure storage and handling, and land application operations.
- Operation procedures specific to the production site and practices.
- Existing documentation of present facility components that would aid in evaluating existing conditions, capacities, etc. (i.e., as-built plans, year installed, number of animals a component was originally designed for, etc.).

2. Production information

- Animal types, phases of production, and length of confinement for each type at this site.
- Animal count and average weight for each phase of production on this site.
- Calculated manure and wastewater volumes for this site.
- Manure storage type, volume, and approximate length of storage.

3. Applicable permits or certifications

- Federal, Tribal, State or local permits and/or ordinances.
- Operator or manager certifications.
- Manure applicator certifications.
- Record of inspections or site assessments.
- Changes made to CNMP.

4. Land application site information

- Date plan prepared.
- Written manure application agreements. (Where Applicable)
- Aerial maps of land application area.
- Individual field maps with marked setbacks, buffers, and waterways, and environmentally sensitive areas, such as sinkholes, wells, gullies, tile inlets, etc.
- Landowner names, addresses, and phone numbers.
- Legal description of land sites, including watershed codes.

- Specific and unique field identification codes.
- Land use designation.
- Soil map, with appropriate interpretations.
- Risk assessments for potential nitrogen or phosphorus transport from fields. (See NRCS GM_190, Part 402, Nutrient Management, Section 402.07)
- Land treatment practices planned and applied, and level of treatment they provide.

5. Manure application plans

- Crop types, realistic yield targets, and expected nutrient uptake amounts.
- Application equipment descriptions and methods of application.
- Expected application seasons and estimated days of application per season.
- Estimated application amounts per acre (volume in gallons or tons per acre, and pounds of plant available nitrogen, phosphorous as P205, and potassium as K20 per acre).
- Estimate of acres needed to apply manure generated on this site, respecting any guidelines published for nitrogen or phosphorous soil loading limits.

6. Actual activity records

- Soil tests not more than 5 years old.
- Manure test annually for each individual manure storage containment.
- Planned and applied rates, methods of application, and timing (month and year) of nutrients applied. (Include all sources of nutrients, i.e., manure, commercial fertilizers, etc.)
- Current and planned crop rotation.
- Weather conditions during nutrient application. (Optional)
- General soil moisture condition at time of application (i.e., saturated, wet, moist, dry). (Optional)
- Actual crop and yield harvest from manure application sites.
- Record of internal inspections for manure system components.
- Record of any spill events.

7. Mortality disposal

- Plan for mortality disposal.
- Methods and equipment used to implement the disposal plan.

8. Operation and Maintenance

- Detailed operation and maintenance procedures for the conservation systems, holding facility, etc., contained in the CNMP. This would include procedures as calibration of land application equipment, storage facility emptying schedule, soil and manure sampling techniques, etc.